

REMARKS

This communication is in response to the final Office Action dated April 13, 2006 for the above referenced patent application

Statement of the Substance of the Interview

Applicant would like to thank Examiner Kunemund for the courtesy of an in-person interview conducted on July 11, 2006 with inventor Dr. Lionel O'Young, and Applicant's attorney Maria Swiatek.

During the interview the pending claims, the Konrad reference, and the rejections cited in the Office Action mailed on April 13, 2006 were discussed. Specifically, we discussed the system of the present invention and the particular system units and configuration. It was noted that Konrad does not employ a solvent and only teaches the removal of components, whereas the mixer/separator unit of the present invention provides for addition of solvent components. It was further noted that the system of the present invention may employ a phenol-removal unit and a solvent recovery unit, neither of which are taught or suggested by Konrad. The Applicant agreed to consider amendment to the claims to further clarify the invention. No agreement was reached during the interview.

Response to the Office Action

This communication is in response to the final Office Action dated April 13, 2006 for the above referenced patent application. Claims 1 – 15 remain withdrawn. Claims 16, 22 and 23 are amended to more particularly claim the invention. Claims 26 and 27 are amended to change their dependency. Claims 18 and 25 are cancelled. New Claim 28 is added which recites further features of embodiments of the present invention. Support for claim 28 is found in the specification and original claims. Upon entry of this amendment, Claims 16 – 17, 19 – 24 and 26 – 28 are pending and under consideration in this application.

The Examiner rejects Claims 16 to 27 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent no. 4,107,218 to Konrad *et al*. ("Konrad). Applicant respectfully

traverses this rejection and submits that the amended claims are patentable over the cited reference.

To establish a proper case of prima facie obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the cited reference relied upon by the Examiner to arrive at the claimed invention. Second, there must be a reasonable expectation that the suggested modification or combination would be successful. Finally, the prior art reference (or references when combined) must teach or suggest each and every limitation of the rejected claims. The teaching or suggestion to make the claimed modification or combination and the reasonable expectation of success must both be found in the prior art, and not based upon in the applicant's disclosure. M.P.E.P. §706.02.

Applicant submits that the amended claims are patentable in light of Konrad and that Konrad does not render the amended claims obvious. Specifically, Konrad shows a reactor 12, dehydrator 14 and crystallizer 16. At column 3, lines 1 – 15, Konrad states:

“The product stream flowing from the reactor 12 contains phenol, 4,4'-bisphenol-A, some unreacted acetone, mercaptan promoter, water, and by-products. The product stream flows from the reactor 12 to a dehydrator 14, in which the acetone, mercaptan promoter, water, and some of the phenol are stripped from the product stream. The dehydrated product stream flows from the dehydrator 14 to a crystallizer 16, in which 4,4'-bisphenol-A/adduct crystals are precipitated by cooling. The slurry of mother liquor and adduct crystals flows from the crystallizer to a solid-liquid separator such as a centrifuge 18, in which the mother liquor and adduct crystals are separated. The 4,4'-bisphenol-A product is recovered from the adduct crystals by known techniques (not shown).”

In significant contrast, Claim 16 of the present invention recites a mixer/separator unit which is configured to selectively add solvent to the product stream wherein the composition of the product stream exhibits a phase equilibrium relationship such that Bisphenol-A crystals are formed during crystallization. Claim 16 further recites a BPA crystallizer stage which produces substantially pure Bisphenol-A crystals directly upon crystallization, without prior adduct crystallization.

Konrad does not teach or reasonably suggest a mixer/separator for adding solvent as recited in Claim 16. In fact, Applicant believes that Konrad teaches away from Applicant's claims since Konrad teaches removal of components in the dehydrator. Konrad does not employ a solvent. Konrad does not teach or reasonably suggest a BPA crystallizer stage which produces substantially pure Bisphenol-A crystals directly upon crystallization, without prior adduct crystallization as recited in Claim 16. Konrad teaches only an adduct crystallizer where bisphenol-A/adduct crystals are precipitated by cooling. Konrad simply states that the 4,4'-bisphenol-A product is recovered from the adduct crystals by known techniques that are not shown. These known techniques referred to by Konrad are the prior art techniques known in the late 1970's and are consistent with the shortcomings of the prior art which require costly and cumbersome de-phenolation of the adduct as described in the background section of the subject application.

Further, Konrad does not teach or reasonably suggest a partial phenol removal unit in combination with a mixer/separator unit configured to selectively adjust the composition of the product stream by mixing with one or more recycle streams, as recited in amended Claim 22. Nor does Konrad teach or reasonably suggest a partial phenol removal unit in combination with a mixer/separator unit, and a solvent recovery unit as recited in new Claim 28.

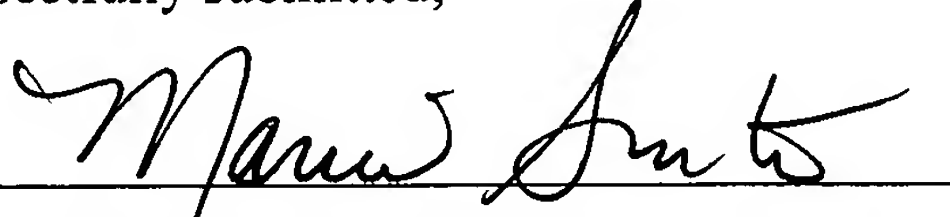
Applicant respectfully submits that the teaching of Konrad would not motivate one to arrive at Applicant's amended claims. Konrad's purpose and motivation are different from the subject application. Konrad never contemplated a system that provides a BPA crystallizer that produces BPA crystals directly by selective control of the composition of the product stream as

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recited in Applicant's amended claims. Applicant respectfully submits that the amended claims are patentable over the cited art.

Based on the foregoing, Applicant respectfully submits that the application is now in condition for allowance. If any matters can be resolved by telephone, the Examiner is invited to call the undersigned attorney at the telephone number listed below. The Commissioner is authorized to charge any additional fees to Deposit Account No. 50-2319 (Order No. A-71202/MSS (469332-20)).

Respectfully submitted,

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